

## ABSTRACT

The invention relates to proteins or polypeptides that comprise intramolecular dimers of fluorescent protein monomers. More specifically, the invention relates to recombinant polypeptides comprising a monomer of a fluorescent polypeptide, a linker peptide, and a second monomer of that fluorescent polypeptide, where the monomers form an intramolecular dimer. The invention also relates to nucleic acids encoding Intramolecular Dimer Fluorescent Proteins (IDFPs) and vectors comprising such nucleic acids. The invention further relates to methods of making IDFPs and methods of using them. IDFPs are, useful in any application suited for fluorescent proteins and are particularly useful in applications in which more than one fluorescent protein sharing complementary dimerization interfaces is present in the same mixture or is expressed in the same cell, because IDFPs do not form heterodimers.